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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/507,267

04/06/2005

Eugeny A. Lukhtanov

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20350

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06/25/2008

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

STAPLES, MARK

ART UNIT

PAPER NUMBER

1637

MAIL DATE

DELIVERY MODE

06/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/507,267	Applicant(s) LUKHTANOV ET AL.	
	Examiner Mark Staples	Art Unit 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/13/2008 and 02/14/2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 3,7-9,21-23,26,29,38-56 and 58-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 10-20, 24, 25, 27-28, 30-32, and 57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/20/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-63 are pending and claims 3, 7-9, 21-23, 26, 29, 38-56, and 58-63 are withdrawn (see Office action mailed on 08/16/2007).

Claims 1, 2, 4-6, 10-20, 24, 25, 27-28, 30-32, and 57 are at issue.

Applicant's arguments filed on 02/13/2008 and 02/14/2008 have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Declaration under 37 CFR 1.132 Sufficient

2. The declaration by Eugeny A. Lukhtanov and Nicolaas M.J. Vermeulen under 37 CFR 1.132 filed 02/14/2008 is sufficient to overcome the rejection of claims 1, 2, 4, 5, 10-20, 24, 25, 27-28, 30-32 and 57 under 35 U.S.C. 102(e) based upon Lukhtanov et al. (US Patent No. 6,790,945 filed June 6, 2001). Therefore the rejection is withdrawn, see below.

Objections and Rejections that are Withdrawn

3. The objection to the specification for improper use of trademarks is withdrawn in light of Applicant's amendment of the specification to indicate trademarks according to current Office guidelines.

Sequence Rules Compliance

4. It is acknowledged that Applicant has amended the specification to be in compliance with sequence rules.

Claim Rejection Withdrawn - 35 USC § 102 (e)

5. The rejection of claims 1, 2, 4, 5, 10-20, 24, 25, 27-28, 30-32 and 57 under 35 U.S.C. 102(e) as being anticipated by Lukhtanov et al. (US Patent No. 6,790,945 filed June 6, 2001) is withdrawn. Applicant's declaration under 37 CFR 1.132 filed 02/14/2008 is sufficient to overcome this rejection.

Inventorship

6. In the declaration under 37 CFR 1.132 filed 02/14/2008 Eugeny A. Lukhtanov and Nicolaas M.J. Vermeulen have declared that they: ". . . are the only inventors of the subject matter . . . disclosed and claimed in the '267 application [the instant application]" (see item 3 of the declaration). However, Sergey G. Lokhov has signed as inventor on the declaration of the instant application filed on 04/06/2005 and thus has declared that he is an inventor of the instant application and instant claims. Sergey G. Lokhov is listed as an inventor while Eugeny A. Lukhtanov and Nicolaas M.J. Vermeulen declare

themselves to be the only two inventors of the subject matter disclosed and claimed in the instant application.

Applicant is reminded that failure to clarify and/or correct the inventorship of the instant application and pending claims (see MPEP § 201.03 with reference there to 37 CFR 1.48 b) may result in a rejection under 35 USC § 102 (f).

Rejections that are Maintained

Claim Rejections Maintained - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The rejection of claims 1, 2, 6, 10, 11, 13, 14 and 57 under 35 U.S.C. 102(b) as being anticipated by Sinyakov et al. (originally published Feb. 2001, cited in previous Office Action) is maintained. Applicant's arguments filed 02/13/2008 have been fully considered but they are not persuasive.

Applicant argues that Sinyakov et al. teach neutral oligonucleotide conjugates and thus these conjugates being neutral do not anticipate the claimed invention of negatively charged minor groove binders. However Sinyakov et al. also teach the structure named MGB-4 and as shown in Figure 2 which contains a carboxylic group which is an acidic moiety capable of ionizing under physiological conditions to be a

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negatively charged minor groove binder. Furthermore, Sinyakov et al. teach: "Synthesis of minor groove binders MGB-4 . . . their analysis, and the NMR-based structure proof were carried out as described in [16]" (see 4th full paragraph on p. 252). Thus, Sinyakov et al. teach MGB-4 with an acidic moiety and teach that MGB-4 is a minor groove binder. The MGB-4 as so taught by Sinyakov et al. is a negatively charged minor groove binder and reads on the instant claims. Thus the rejection is maintained.

Double Patenting Rejection Maintained

9. The rejection of claims 1, 2, 4-6, 10-20, 24, 25, 27-28, 30-32 and 57 on the ground of nonstatutory double patenting over claims 1-34 of U. S. Patent No. 6,790,945 is maintained. Applicant does not argue against this rejection.

Reference of Interest

10. Applicant argues that the minor groove binders of the present invention are defined as non-intercalating compounds and thus that the intercalator of Bailey does not read on the instant claims. However, Examiner does not find such a definition in the instant specification but has found that the specification states the binding preferably be, but need not only be, in a non-intercalating manner (see paragraph 0006) which does not exclude, but rather allows, the instant compounds to be intercalating compounds. Thus the reference of Bailey is still of interest in regards to the instant application.

Conclusion

11. No claim is allowed.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Staples whose telephone number is (571) 272-9053. The examiner can normally be reached on Monday through Thursday, 9:00 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark Staples

/M. S./

Examiner, Art Unit 1637

June 18, 2008

/Kenneth R Horlick/

Primary Examiner, Art Unit 1637